CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.11/S/CEMENT/2013-14

Date: 17.03.2014

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
AGENCY	:	**Mr. Subbanna,** Contractor, Bangalore.
NAME OF THE WORK	:	Improvements to Roads and Drains in Singapura Paradise low level areas in Ward No.11 Kuvempunagara, BBMP, Bangalore.
REFERENCE	:	AEE/VSD/PR/456/2013-14 Dated: 15.03.2014
SAMPLE ID	:	Cement
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-1989
1	a) Initial Setting Time	IS-4031 (Part -5)	125 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	490 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	26.00 %	-

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Job No.: CTCE/BBMP/W.No.11/S/SAND/2013-14 : 17.03.2014

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Mr. Subbanna,** Contractor, Bangalore.

Name of Work : Improvements to Roads and Drains in Singapura Paradise low level areas in Ward No.11 Kuvempunagara, BBMP, Bangalore.

Reference : AEE/VSD/PR/456/2013-14 Dated: 15.03.2014

Date of Testing : 17.03.2014

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	89	4.45	4.45	95.6	90-100
2.36	227	11.35	15.80	84.2	75-100
1.18	513	25.65	41.45	58.6	55-90
600 Micron	426	21.30	62.75	37.3	35-59
300 Micron	498	24.90	87.65	12.4	8-30
150 Micron	205	10.25	97.90	2.1	0-10

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Job No.: CTCE/BBMP/W.No.11/S/AGG/2013-14 : 17.03.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Mr. Subbanna,** Contractor, Bangalore.

Name of Work : Improvements to Roads and Drains in Singapura Paradise low level areas in Ward No.11 Kuvempunagara, BBMP, Bangalore.

Reference : AEE/VSD/PR/456/2013-14 Dated: 15.03.2014

Date of Testing : 17.03.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	985	3.94	3.94	96.06	95-100
20	15180	60.72	64.66	35.34	30-70
10	5925	23.70	88.36	11.64	10-35
4.75	2570	10.28	98.64	1.36	0-5

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Job No.: CTCE/BBMP/W.No.11/S/STEEL/2013-14 18.03.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. Subbanna**, Contractor, Bangalore.
Name of the Work	:	Improvements to Roads and Drains in Singapura Paradise low level areas in Ward No.11 Kuvempunagara, BBMP, Bangalore.
Reference	:	AEE/VSD/PR/456/2013-14 Dated: 15.03.2014
Date of Test	:	18.03.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	12	0.89	515	555	13.35	O.K	O.K

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Job No.: CTCE/BBMP/W.No.11/S/STEEL/2013-14 18.03.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. Subbanna**, Contractor, Bangalore.
Name of the Work	:	Improvements to Roads and Drains in Singapura Paradise low level areas in Ward No.11 Kuvempunagara, BBMP, Bangalore.
Reference	:	AEE/VSD/PR/456/2013-14 Dated: 15.03.2014
Date of Test	:	18.03.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	16	1.58	520	559	13.60	O.K	O.K

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.11/S/CUBE/2013-14

29.03.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	: **Mr. Subbanna,** Contractor, Bangalore.
Name of the work	: Improvements to Roads and Drains in Singapura Paradise low level areas in Ward No.11 Kuvempunagara, BBMP, Bangalore.
Reference	: AEE/VSD/PR/456/2013-14 Dated: 15.03.2014
Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	22.03.2014	29.03.2014	8.295	326.8	14.52
2	22.03.2014	29.03.2014	8.476	344.9	15.33
3	22.03.2014	29.03.2014	8.312	335.7	14.92

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Job No.: CTCE/BBMP/W.No.11/S/WMM/Gradation/2013-14 25.03.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Mr. Subbanna,** Contractor, Bangalore.

Name of Work : Improvements to Roads and Drains in Singapura Paradise low level areas in Ward No.11 Kuvempunagara, BBMP, Bangalore.

Reference : AEE/VSD/PR/456/2013-14 Dated: 15.03.2014

Date of Testing : 25.03.2014

Material : WMM

Sample Location : WMM Mix Plant Oven Dry Wt (gm): **26000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	1020	1020	3.9	96.1	95-100
22.4	5985	7005	26.9	73.1	60-80
11.2	5560	12565	48.3	51.7	40-60
4.75	4875	17440	67.1	32.9	25-40
2.36	3350	20790	80.0	20.0	15-30
0.600	2545	23335	89.8	10.3	8-22
0.075	2380	25715	98.9	1.1	0-8

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Job No.: CTCE/BBMP/W.No.11/S/SDBC/Bit/2013-14 29.03.2014

BITUMEN CONTENT DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

AASHTO T 164 & AASHTO T 30

CLIENT	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
AGENCY	**Mr. Subbanna,** Contractor, Bangalore.
NAME OF THE WORK	Improvements to Roads and Drains in Singapura Paradise low level areas in Ward No.11 Kuvempunagara, BBMP, Bangalore.
REFERENCE	AEE/VSD/PR/456/2013-14 Dated: 15.03.2014
SAMPLE I/D	Roads in Ward No.11, BBMP
DATE OF TESTING	29.03.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	476.5	476
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23.5	24.00
7. Bitumen content in %	4.70	4.80
8. Average	**4.75**	

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Job No.: CTCE/BBMP/W.No.11/S/SDBC/Bit/2013-14 29.03.2014

BITUMEN CONTENT AFTER GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX AASHTO T 164 & AASHTO T 30

CLIENT	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
AGENCY	**Mr. Subbanna,** Contractor, Bangalore.
NAME OF THE WORK	Improvements to Roads and Drains in Singapura Paradise low level areas in Ward No.11 Kuvempunagara, BBMP, Bangalore.
REFERENCE	AEE/VSD/PR/456/2013-14 Dated: 15.03.2014
SAMPLE I/D	Roads in Ward No.11, BBMP
DATE OF TESTING	29.03.2014

GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-4 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	35.62	7.48	7.48	92.52	90-100
4.75	250.47	52.56	60.04	39.96	35-51
2.36	45.69	9.59	69.63	30.37	24-39
1.18	32.47	6.81	76.44	23.56	15-30
0.3	47.18	9.90	86.34	13.66	9-19
0.075	43.26	9.08	95.42	4.58	3-8

Sieve Size in mm	Trail 2				Specified Limits as per MORTH specification table 500-4 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	27.52	5.78	5.78	94.22	90-100
4.75	256.78	53.95	59.73	40.27	35-51
2.36	53.28	11.19	70.92	29.08	24-39
1.18	42.59	8.95	79.87	20.13	15-30
0.3	26.39	5.54	85.41	14.59	9-19
0.075	46.32	9.73	95.14	4.86	3-8

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